

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/JP2004/012453

International filing date (day/month/year)
24.08.2004

Priority date (day/month/year)
26.08.2003

International Patent Classification (IPC) or both national classification and IPC
H05K13/04

Applicant
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1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/JP2004/012453

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/JP2004/012453

Box No. II Priority

1. ☐ The following document has not been furnished:

- ☐ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).
- ☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. ☒ The International Searching Authority has not been able to consider the validity of the priority claim because a copy of the earlier application whose priority has been claimed was not available to the International Searching Authority at the time that the search was conducted (Rule 17.1). This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

4. Additional observations, if necessary:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1 2 4 7-13 18-25 29-31
Inventive step (IS)	Yes: Claims	
	No: Claims	1-31
Industrial applicability (IA)	Yes: Claims	
	No: Claims	1-31

2. Citations and explanations

see separate sheet

1

The following documents are referred to in this communication:

D1 : US 6 002 650 A (KURIBAYASHI TAKESHI ET AL) 14 December 1999 (1999-12-14)

D2 : US 2001/020325 A1 (LUECKEHE HANS-WERNER) 13 September 2001
(2001-09-13)

D3 : EP 0 453 370 A (EUROSOFT ROBOTIQUE) 23 October 1991 (1991-10-23)

2

INDEPENDENT CLAIM 1

2.1

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT. Document D1 discloses in particular (the references in parentheses applying to this document):

A computer verification method for verifying, by use of a computer (208), a component taken out by a mounter (2) from a component holder (14) holding a plurality of components,

wherein the component holder is placed in the mounter with an integrated circuit (IC) tag (104) being attached to said component holder (14), said IC tag (104) storing identification information for identifying the components held by the component holder (14), and the component verification method comprises :

 a position specification step of specifying a placement position on the mounter (2) where the component holder (14) is placed;

 a read step of reading the identification information from the IC tag (104) attached to the component holder (14); and

 a verification step of verifying (I) the identification information read out in the read

step against a prescribed component information for identifying a component that should be mounted on the board (1), and (ii) the placement position specified in the position specification step against prescribed position information indicating a position where the component (14) holder should be placed .

2.2

The present application does not either meet the criteria of Article 33(1) PCT, because the subject-matter of independent claim 1 is not new in the sense of Article 33(2) PCT when considering Document D2 or Document D3 .

3

INDEPENDENT CLAIM 11

3.1

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 11 is not new in the sense of Article 33(2) PCT. Document D1 discloses (the references in parentheses applying to this document):

A component arrangement data generation method for generating, by use of a computer, component arrangement data for a mounter (2) that mounts a component onto a board (1), said component arrangement data indicating a relationship between a placement position where a component holder (14) holding a plurality of components is placed and the components held by said component holder (14),

wherein the component holder (14) is placed in the mounter (2) with an integrated circuit (IC) tag (104) being attached to said component holder (14), said IC tag (104) storing identification information for identifying the components held by the component holder (14) and,

the component arrangement data generation method comprises:

a position specification step of specifying the placement position on the mounter where the component holder (14) is placed;

a read step of reading the identification information from the IC tag (104) attached to the component holder; and

a data generation step of generating the component arrangement data in which the placement position specified in the position specification step is associated with the identification read out in the read step .

3.2

The present application does not either meet the criteria of Article 33(1) PCT, because the subject-matter of independent claim 11 is not new in the sense of Article 33(2) PCT when considering Document D2 or Document D3.

4

INDEPENDENT CLAIM 12

4.1

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 12 is not new in the sense of Article 33(2) PCT. Document D1 discloses (the references in parentheses applying to this document):

a component library generation method for generating, by use of a computer, a component library that is a collection of information related to components held by a component holder (14) placed in a mounter (2),

wherein the component holder (14) is attached with an integrated circuit (IC) tag (104) storing identification information for identifying the components held by the component holder (14), and

the component library generation method comprises:

a read step of reading the identification information from the IC tag (104) attached to the component holder (14); and

a generation step of generating the component library that includes the identification information read out in the first step .

5

INDEPENDENT CLAIM 18

5.1

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 18 is not new in the sense of Article 33(2) PCT. Document D1 discloses (the references in parentheses applying to this document):

A component holder (14) that holds a plurality of components, comprising an integrated circuit (IC) tag (104) storing identification information for identifying said plurality of components .

5.2

Furthermore the subject-matter of independent claim 18 is not new with regards to the disclosures of D2 or D3 (see D2, page 2, alinea 0014 and alinea 0018 or D3, col.3, line 49-col.4, line 17).

6

INDEPENDENT CLAIM 22

6.1

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 22 is not new in the sense of Article 33(2) PCT. Document D1

discloses (the references in parentheses applying to this document):

A component verification method that verifies a component taken out by a mounter (2) from a component holder (14) against a component that should be mounted onto a board (1) by said mounter (2), said component holder (14) holding a plurality of components, wherein the component holder (14) is placed in the mounter (2) with an integrated circuit (IC) tag (104) being attached to said component holder (14), said IC tag (104) storing identification information for identifying the components held by the component holder (14), and

the component verification apparatus comprises :

a position specification unit (101) operable to specify a placement position on the mounter where the component holder is placed;

a read unit (105) operable to read the identification information from the IC tag (104) attached to the component holder; and

a verification unit (102) operable to verify (i) the identification information read out by the read unit (105) against a prescribed component information for identifying a component that should be mounted on the board (1), and (ii) the placement position specified by the position specification unit (101) against prescribed position information indicating a position where the component holder (14) should be placed .

6.2

Claim 22 would lack novelty as well with regards to the disclosures of D3 (see col. 6, line 47 to col. 7, line 16).

7

INDEPENDENT CLAIM 24

7.1

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 24 is not new in the sense of Article 33(2) PCT. Document D1 discloses (the references in parentheses applying to this document):

A component arrangement data generation apparatus that generates component arrangement data for a mounter (2) that mounts a component onto a board, said component arrangement data indicating a relationship between a placement position where a component holder (14) holding a plurality of components is placed and the components held by said component holder ,
wherein the component holder is placed in the mounter (2) with an integrated circuit (IC) tag (104) being attached to said component holder (14), said IC tag (104) storing identification information for identifying the components held by the component holder (14), and

the component arrangement data generation apparatus comprises:

a position specification unit (101) to specify the placement position on the mounter (2) where the component holder (14) is placed;

a read unit (105) to read the identification information from the IC tag (104) attached to the component holder (14); and

a data generation unit operable to generate the component arrangement data in which the placement position specified in the position specification step is associated with the identification read out by the read unit .

7.2

Claim 24 would lack novelty as well with regards to the disclosures of D3 (see col 3, line 49 - col. 6, line 15).

8

INDEPENDENT CLAIM 25

8.1

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 25 is not new in the sense of Article 33(2) PCT. Document D1 discloses (the references in parentheses applying to this document):

a component library generation apparatus (102) that generates a component library being a collection of information related to components held by a component holder (14) placed in a mounter (2),

wherein the component holder (14) is attached with an integrated circuit (IC) tag (104) storing identification information for identifying the components held by the component holder (14), and

the component library generation apparatus comprises:

a read unit (105) operable to read the identification information from the IC tag attached to the component holder (14); and

a generation unit (102) operable to generate the component library that includes the identification information read out by the read unit (105).

9

INDEPENDENT CLAIM 29

9.1

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 29 is not new in the sense of Article 33(2) PCT. Document D3 discloses (the references in parentheses applying to this document):

a mounter (2) that takes out a component from a component holder (14) and mounts said component onto a board (1), said component holder (14) holding a plurality of components,

wherein the component holder (14) is placed in the mounter (2) with an integrated circuit

(IC) tag (104) being attached to said component holder (14), said IC tag storing identification information for identifying the components held by the component holder (14), and
the mounter (2) comprises:
a position specification unit (101) operable to specify the placement position on the mounter where the component holder (14) is placed;
a read unit (105) operable to read the identification information from the IC tag (104) attached to the component holder (14);
a verification unit (102) operable to verify (i) the identification information read out by the read unit (105) against a prescribed component information for identifying a component that should be mounted on the board (1), and (ii) the placement position specified by the position specification unit (101) against prescribed position information indicating a position where the component holder (14) should be placed and
a mounting unit (2) operable to take out each of the components from the component holder (14) and mount said each of the components onto the board (1), when the identification information and the prescribed component information agree as a result of verification performed by the verification unit (102).

10

INDEPENDENT CLAIM 30

10.1

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 30 is not new in the sense of Article 33(2) PCT. Document D1 discloses (the references in parentheses applying to this document):

a program for verifying a component taken out by a mounter (2) against a component that should be mounted onto a board (1) by said mounter(2), said component holder (14) holding a plurality of components,
wherein the component holder (14) is placed in the mounter with an integrated circuit (IC)

tag (104) being attached to said component holder (14), said IC tag (104) storing identification information for identifying the components held by the component holder (14), and

the program causes a computer (102) to execute the following steps:

a position specification step of specifying the placement position on the mounter (2) where the component holder (14) is placed;

a read step of reading the identification information from the IC tag (104) attached to the component holder (14);

a verification step of verifying (i) the identification information read out by the read unit (105) against a prescribed component information for identifying a component that should be mounted on the board (1), and (ii) the placement position specified in the position specification step against prescribed position information indicating a position where the component holder (14) should be placed.

10.2

Claim 30 would lack novelty as well with regards to the disclosures of D3 (see col 3, line 49 - col. 6, line 15).

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DEPENDENT CLAIMS 2, 4-10, 13, 19-21, 23, 31

Dependent claims 2, 4-10, 13, 19-21, 23, 31 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).

12

INDEPENDENT CLAIM 14

12.1

Document D1, which is considered to represent the most relevant state of the art, discloses, see col.24, line 65 to col. 35, line 44, figs. 13-21 (the references in parentheses applying to this document):

A component management method for managing by use of a computer (102), a component that has been taken out from a component holder (14) and mounted onto a board (1) by a mounter (2), said component holder (14) holding a plurality of components, wherein the component holder (14) is attached with a first integrated circuit (IC) tag (104) storing identification information for identifying the components held by the component holder (14), and the component management method comprises
a read step of reading the identification information from the first IC tag (104) attached to the component holder (14);
a mounting step of successively taking out the components from the component holder (14) and mounting said components onto the board (1).

From this, the subject-matter of independent claim 14 differs in that the application involves a supplementary step of writing, to a second IC tag attached to the board, the information read out in the read step from the first IC tag.

12.1.1

The subject-matter of claim 14 is therefore novel (Article 33(2) PCT). The problem to be solved by the present invention may be regarded as managing the population of each board according to the effective mounting data.

12.1.2

The solution to this problem proposed in claim 14 of the present application is thus considered as involving an inventive step (Article 33(3) PCT) as no document showing a method of reading an IC tag provided on the board has been disclosed.

12.1.3

Claims 15-17 are dependent on claim 14 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

13

INDEPENDENT CLAIM 26

13.1

Document D1, which is considered to represent the most relevant state of the art, discloses (the references in parentheses applying to this document):

A mounter (2) that takes out a component from a component holder (14) and mounts said component onto a board (1), said component holder (14) holding a plurality of components,
wherein the component holder (14) is attached with a first integrated circuit (IC) tag (104) storing identification information for identifying the components held by the component holder (14), and
the mounter comprises
a read unit (105) operable to read the identification information from the first IC tag (104) attached to the component holder (14);
a mounting unit (2) operable to successively take out the components from the component holder (14) and mount said components onto the board (1).

From this, the subject-matter of independent claim 26 differs in that the application involves a supplementary write unit operable to write, to a second IC tag attached to the board, the information read out by the read unit from the first IC tag .

13.1.1

The subject-matter of claim 26 is therefore novel (Article 33(2) PCT) The problem to be solved by the present invention may be regarded as managing the population of each board according to the effective mounting datas read from the first IC tag.

13.1.2

The solution to this problem proposed in claim 26 of the present application is considered as involving an inventive step (Article 33(3) PCT) as no document showing a writing unit operable to write datas to an IC tag provided on the board has been disclosed .

13.1.3

Claims 27, 28 are dependent on claim 26 and as such also meet the requirements of the

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AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/JP2004/012453

PCT with respect to novelty and inventive step.